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(54) **Cellular verification and validation system.**

(57) A system for the validation and verification of base stations and mobile stations within a cellular radio communications network. The system includes a fixed key and a changeable key which are applied as inputs to an authentication algorithm. The algorithm generates key-dependent responses, at least one of which is independent of the changeable key. The responses generated by a particular mobile station are compared to the responses generated by the network and the presence of fraudulent users may be detected.



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 92 85 0061

| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|--|--|--|--|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int.Cl.5) |
| A | PROCEEDINGS 1987 INTERNATIONAL CONFERENCE ON DIGITAL LAND MOBILE RADIO COMMUNICATIONS 30 June - 3 July 1987, Venice (IT) H.R.RAST ET AL. "SECURITY MECHANISMS IN THE FUTURE EUROPEAN DIGITAL CELLULAR SYSTEM" * page 126, paragraph 2.2 * * page 129, paragraph 3.2 - page 130, paragraph 3.2 * * figure 2 * | 1,8,15, 20,25, 33,41,51 | H04Q7/04 H04L9/32 |
| A | US-A-4 955 049 (GHISLER) * column 1, line 32 - line 52 * | 1,8,15, 20,25, 33,41,51 | |
| A | WO-A-84 00456 (WESTERN ELECTRIC COMPANY) * abstract * * page 2, line 11 - page 3, line 34 * | 1,8,15, 20,25, 33,41,51 | TECHNICAL FIELDS SEARCHED (Int.Cl.5) |
| A | DE-A-34 20 874 (LICENTIA) * abstract * * page 6, line 4 - page 8, line 12 * * figures 1,2 * | 1,8,15, 20,25, 33,41,51 | H04L H04Q |
| The present search report has been drawn up for all claims | | | |
| Place of search THE HAGUE | | Date of completion of the search 22 September 1994 | Examiner Lydon, M |
| CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document | | T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application I : document cited for other reasons & : member of the same patent family, corresponding document | |

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